SECTION 3
INTERRELATED STUDIES

A number of studies have been conducted on projects within and in proximity to the RGCP. This section contains a summary of major environmental studies, and National Environmental Policy Act (NEPA)-related documents with information relevant to potential impacts of T&E species and environmental conditions of the RGCP.

3.1 DRAFT ENVIRONMENTAL IMPACT IMPACT - RIVER MANAGEMENT ALTERNATIVES FOR THE RIO GRANDE CANALIZATION PROJECT

The USIBWC is evaluating long-term river management alternatives for the RGCP, a 105.4-mile narrow river corridor that extends from below Percha Dam in Sierra County, New Mexico to American Dam in El Paso, Texas. The RGCP, operated and maintained by the USIBWC since its completion in 1944, facilitates water deliveries and provides flood control.

The No Action Alternative and three action alternatives were evaluated in the Draft EIS. The alternatives were developed in a manner that enhances and restores the riparian ecosystem while maintaining flood control and water delivery requirements of the RGCP. Alternatives formulation was the result of a 3-year public consultation process that included regulatory agencies, irrigation districts, and environmental organizations.

Measures under consideration as part of the alternatives included grazing leases modification to improve erosion control, changes in floodway vegetation management, riparian restoration, and aquatic habitat diversification. The USIBWC will select a preferred alternative following the public comment period on the Draft EIS.

3.2 BIOLOGICAL ASSESSMENT - USIBWC RIO GRANDE PROJECTS: AMERICAN DAM TO FORT QUITMAN, TEXAS

In 2001 the USIBWC prepared a BA on the effects of current O&M practices for Rio Grande projects located adjacent and south of the RGCP. Overall, suitable habitat required for nesting T&E species was not present; however, marginal habitat for migrant T&E species existed in limited areas. For instance, sandbars and beaches along the river, many of which become exposed during periods of low flow, provided limited waterfowl habitat and possibly migrant interior least tern habitat. Based on analyses of literature review and field surveys, migrant T&E species use was uncommon but could not be completely ruled out. The BA concluded that current O&M practices (similar to those conducted within the RGCP) did not impact endangered species or adversely affect any critical habitat (Parsons 2001d).

3.3 ENVIRONMENTAL ASSESSMENT FOR OPERATION AND MAINTENANCE OF THE RECTIFICATION PROJECT

The USIBWC prepared an environmental assessment (EA) for the annual O&M of the Rectification Project. The Rectification Project is adjacent and south of the RGCP extending

from American Dam to Fort Quitman, Texas. The EA concluded that O&M activities do not impact endangered species or adversely affect any critical habitat, and that annual O&M work did not constitute a major federal action which would cause significant local, regional, or national impact on the environment (USIBWC 1979).

3.4 RIO GRANDE RECTIFICATION PROJECT MITIGATION ASSESSMENT

In 1995 the USIBWC completed a mitigation assessment as a requirement for Special Condition No. 2 in the Department of the Army Permit No. TX-91-50426 for four potential mitigation opportunities along the Rio Grande Rectification Project (USIBWC 1995). The USIBWC determined that potential mitigation opportunities could be accomplished with existing resources available to the USIBWC. Other opportunities would be accomplished as funding and new information became available. Four mitigation opportunities were considered, establishing Rio Bosque Park Wetlands, seeding denuded areas, tree planting, and preservation of snags in the floodway. These mitigation opportunities were intended to address lack of habitat in the Rio Grande Rectification Project.

3.5 BRIDGE OF AMERICAS REPLACEMENT EA

An EA of the Bridge of the Americas concluded that bridge construction would not significantly impact natural and cultural resources (USIBWC 1993a). The Bridge of the Americas is adjacent and south of the RGCP. The bridge is located in a reach of the Rio Grande confined to a concrete channel 4.4 miles long. This concrete channel did not provide habitat for T&E species. Notice of Availability of the Final EA and Finding of No Significant Impact (FONSI) was published in the Federal Register July 14, 1993.

3.6 AMERICAN CANAL EXTENSION PROJECT EA

The Rio Grande American Canal Extension included rehabilitation of a portion of the existing Franklin Canal, construction of a new, reinforced concrete-lined canal, and other associated works. The project was adjacent and south of the RGCP. The EA concluded that the project would benefit fish and wildlife by implementation of mitigation plans to provide wetlands (USIBWC 1993b).

Notice of availability of the Final EA and a FONSI was published in the Federal Register January 7, 1994. This publication included a report by the U.S. Fish and Wildlife Service (USFWS), with Texas Parks and Wildlife Department, prepared under authority of the Fish and Wildlife Coordination Act. The Fish and Wildlife report recommended creation of 30 acres of wetlands as mitigation for losses to wetland habitat associated with construction of the project. The Rio Bosque Park was suggested as a location for the wetlands mitigation site.

3.7 RECONSTRUCTION OF THE AMERICAN CANAL PROJECT EA

In 2001 a final EA for the proposed action of reconstruction of the existing American Canal was published (Encon International, Inc. 2001). The proposed project for rehabilitation

and enlargement of the 1.98-mile-long American Canal (also known as Reach F) included demolishing the deteriorating concrete open channel segments of the canal and replacing them with reinforced concrete-lined canal segments. No T&E species were observed in this study and no potential T&E habitat was affected by the action. The EA concluded that this activity was not a major federal action that would have a significant adverse effect on the quality of the human environment.

3.8 RIO GRANDE MANAGEMENT PLAN

On July 18, 1994 the USIBWC submitted the Rio Grande Management Plan to fulfill a special condition of the Clean Water Act Section 404 permit issued by the USACE for dredge and fill activities associated with the annual maintenance on the RGCP and three other projects (Rectification Project, Presidio/Ojinaga Flood Control Project, and the Rio Grande Boundary Preservation Project). The purpose of the management plan was to identify opportunities for preservation and enhancement of riparian habitat and to identify possible mitigation measures for unavoidable impacts (USIBWC 1994).

3.9 BIOLOGICAL ASSESSMENT OF SPOIL REMOVAL IN THE RGCP

A BA for spoil removal in the RGCP was prepared in 1994 (Ohmart 1994). The report separately evaluated each arroyo in the RGCP and recommended ways to minimize impacts. The study indicated that the bald eagle, interior least tern, and whooping crane could potentially occur as transients in the RGCP. These species were not expected to be impacted due to the limited disturbance by spoil removal and timing of the activity. The northern aplomado falcon, the southwestern willow flycatcher, and Sneed pincushion cactus were not expected to occur due to lack of suitable habitat. The BA determined that the effects of spoil removal from the mouths of arroyos on T&E species would be insignificant due to lack of habitat.

3.10 EIS FOR EL PASO-LAS CRUCES SUSTAINABLE WATER PROJECT

In December 2000, an environmental impact statement (EIS) was completed for the El Paso-Las Cruces Regional Sustainable Water Project, an initiative to secure Rio Grande water as a long-term drinking water supply for the Cities of El Paso and Las Cruces (USIBWC and EPWU/PSB 2000). This project required water transfer using diversion structures and aqueducts whose area of influence overlaps with that of the RGCP.

The "River with Local Plants" was identified as the Preferred Alternative for the project. This alternative would include expansion of an existing water treatment plant, construction of four new plants, and construction of four permanent diversion structures on the Rio Grande. Water would be conveyed through underground pipelines. The EIS included standard construction and operating procedures, BMPs, and recommended environmental enhancements and impact avoidance.

T&E studies done for this EIS included habitat studies and reconnaissance-level surveys for birds, amphibians and reptiles, and mammals. No suitable habitat was observed for aquatic species. Based on literature reviews and habitat evaluations, the bald eagle, southwestern willow flycatcher, interior least tern, and whooping crane potentially use or migrate through the area. The bald eagle and southwestern willow flycatcher were observed during field surveys. Bald eagles were observed along the Rio Grande in Doña Ana County, New Mexico; southwestern willow flycatchers were observed in Seldon Canyon.

3.11 FISH AND WILDLIFE COORDINATION ACT REPORT FOR THE EL PASO-LAS CRUCES REGIONAL SUSTAINABLE WATER PROJECT

In March 2001, the USFWS published the final Fish and Wildlife Coordination Act Report for the El Paso-Las Cruces Regional Sustainable Water Project (USFWS 2001). Based on the evaluation of fish and wildlife impacts, and the existing ecosystem condition of the Rio Grande from Elephant Butte Reservoir to El Paso, the USFWS made several recommendations to mitigate for expected impacts of all alternatives proposed in the El Paso-Las Cruces Regional Sustainable Water Project EIS. The USFWS compared and ranked alternatives based on their potential impacts on aquatic and terrestrial resources, and rated those alternatives in terms of their potential to enhance aquatic and terrestrial communities. The USFWS stated that one benefit of the preferred alternative for the Rio Grande fisheries and other aquatic-dependent species is the contribution to a more year-round flow regime that would be necessary before effective enhancements to the riverine ecosystem could be considered (USFWS 2001).

3.12 BIOLOGICAL ASSESSMENT FOR THE EL PASO-LAS CRUCES REGIONAL SUSTAINABLE WATER PROJECT

In May 2000, a BA was completed for the El Paso-Las Cruces Regional Sustainable Water Project (CH2M Hill & Geomarine 2000). The BA addressed the presence of potentially suitable habitat for T&E species, results of field surveys, and effects determination for species with potential to occur in the RGCP and surrounding areas. The BA found that potential habitat existed in the Rio Grande corridor for the brown pelican, whooping crane, bald eagle, southwestern willow flycatcher (Seldon Canyon only), and interior least tern. The BA concluded that the effect of the project on these species was "may affect, not likely to adversely affect." The BA provided recommendations for mitigation and enhancement of wildlife habitat. Recommendations included control of exotic species, channel enhancements (embayments, backwaters, and sloughs), native riparian vegetation plantings, and watershed management measures.

3.13 RGCP THREATENED AND ENDANGERED SPECIES SURVEY TECHNICAL REPORT

In April 2001, a report on T&E species was prepared for the RGCP (Parsons 2001c). That report described the results of T&E habitat surveys and T&E species presence/absence surveys conducted in the RGCP (September 2000, November-December 2000, and

January 2001). The only T&E species observed during field surveys was the interior least tern. No suitable nesting habitat for T&E bird species was observed, although there was limited habitat to potentially attract migratory birds such as the interior least tern and piping plover, for feeding and resting. No aquatic species nor suitable habitat for aquatic T&E species was observed (Parsons 2001c).

3.14 ALTERNATIVES FORMULATION REPORT

An alternatives formulation report (AFR) was issued in March 2001 as the basis to determine potential effects associated with river management alternatives for the RGCP (Parsons 2001a). The report described the formulation and public consultation process, and preliminary alternatives based upon issues raised by stakeholders in public scoping meetings (October 1999), technical workshops and public meetings conducted in Las Cruces and El Paso between September and October 2000. A comprehensive list of potential environmental measures and O&M practices was used to prepare the AFR. The list of potential environmental measures was screened based on compatibility with project functionality, primarily flood containment. Hydraulic modeling was used to identify locations and potential changes in levee functionality along the RGCP due to implementation of environmental measures. Four action alternatives were screened in the AFR for future evaluation in the EIS.

3.15 CITY OF LAS CRUCES BIOLOGICAL EVALUATION

In 2002 the City of Las Cruces received a USEPA Sustainable Development Challenge Grant to initiate the Rio Grande Riparian Ecological Corridor Project (City of Las Cruces 2003). Kay Kasa Enterprises was commissioned to conduct a biological evaluation to assess the impacts of the project on Threatened, Endangered, and Sensitive species and habitat. Two project components were evaluated: wetland construction, and the development of a hike and bike trail along the Rio Grande adjacent to the City of Las Cruces.

The wetland construction component targets a 30-acre parcel southwest of Las Cruces, currently owned by the New Mexico Game and Fish Department. The proposed wetland would be inundated with ground water seepage and drain water from the Picacho Drain. Salt cedar will also be removed in an effort to offset consumptive water use by the wetland. The proposed path along the Rio Grande floodway is 1.1 miles long, originating at the Mesilla Bridge and extending north to the Las Cruces Outfall Channel.

Findings of the BA indicate that the City of Las Cruces Riparian Corridor Project "May affect – but is not likely to adversely affect" threatened, endangered, and sensitive species or their habitats (City of Las Cruces 2003). All reasonably foreseeable negative impacts would be entirely mitigable, and most foreseeable impacts would be positive.

3.16 REFORMULATION OF RIVER MANAGEMENT ALTERNATIVES FOR THE RIO GRANDE CANALIZATION PROJECT

Findings of the AFR, issued in March 2001 (Parsons 2001a), were reviewed during presentations and a technical workshop organized by the USIBWC between June 14, 2001 and May 8, 2002 (Parsons 2003). These presentations were attended by representatives of the USBR, USFWS, EBID, El Paso County Water Improvement District No. 1, the SWEC, Alliance for the Rio Grande Heritage, and Rio Grande Citizens Forum. Four review meetings with members of the farming community and representatives of various environmental organizations were also held by the USIBWC between October 31, 2001 and December 5, 2002. Reformulated alternatives retained for the EIS analysis reflected additional analyses performed by the USIBWC in response to comments and input from various stakeholders. The reformulated alternatives were incorporated into the DEIS (Parsons 2003).